23. (Amended) A method for stably transferring DNA into multi-potential hematopoietic stem cells in the G0 phase of the cell cycle, which comprises transducing said multi-potential hematopoietic stem cells with an adeno-associated virus vector that contains said DNA, wherein said multi-potential hematopoietic stem cells are $CD34^{+++}CD38^{-}$ cells in the G0 phase of the cell cycle and wherein the transferred DNA remains integrated into the genome of the multi-potential hematopoietic stem cells for at least 4 weeks.

REMARKS

Claims 1-23 currently are pending in this application. All rejections of record have been withdrawn with the exception of the rejections addressed below. In this response Applicants have amended claims 1, 2, 7, 13, 19-21 and 23.

Claims 1-23 are rejected under 35 U.S.C. §112, second paragraph, as indefinite. Specifically, the Office considers the phrases "stably transfecting," "substantially," "low cytokine levels," and "derived from" to be vague and indefinite. Applicants respectfully disagree with the Office's interpretation of these phrases as they would be understood by a person of ordinary skill in the art and of the description provided in the specification. Nevertheless, the claims have been amended to avoid or further explain the above terms.

Claims 1 and 23 have been amended to recite "for at least four weeks" as suggested by the examiner at page 3, lines 16-18 by incorporating language of claim 12. Claims 11 and 12 have been canceled herein.

Claim 2 has been amended to more clearly indicate the mitotic state of the cells. Support for the amendment can be found throughout the application and specifically at page 15, lines 9-19. Claims 6 and 16 have been canceled.

Further minor amendments have been made to claims 7, 13 and 19-21 to change claim dependencies necessitated by the cancellation of claims.

In view of the above amendments and remarks, Applicants believe that the claims now are in condition for allowance and request favorable consideration at this time.

Respectfully submitted,

By: _____

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Enclosure: Mark-up of Claims

1954-287.am3

Mark-up of Claims:

1. (Amended) A method for stably transferring DNA into multi-potential hematopoietic stem cells in the G0 phase of the cell cycle, which comprises transducing said multi-potential hematopoietic stem cells with an adeno-associated virus vector that contains said DNA, wherein the transferred DNA remains integrated into the genome of the multi-potential hematopoietic stem cells for at least 4 weeks.

2. (Amended) A method according to claim 1, wherein the transduced multi-potential hematopoietic stem cells are maintained under conditions such that at least about 92 to 99% of the cells in the G0 phase [do not differentiate or undergo mitosis substantially during the transduction process] remain in the G0 phase for at least about two days.

7. (Amended) A method according to claim [6] 2, wherein the conditions under which the multi-potential hematopoietic stem cells are maintained include cytokine levels no greater than about 15 ng/ml IL-3, 15 ng/ml IL-6 and 1.5 ng/ml granulocyte-macrophage colony stimulating factor.

13. (Amended) A method according to claim [11] 1, wherein the transferred gene remains integrated into the genome of the multi-potential hematopoietic stem cells for at least 8 weeks.

19. (Amended) A method according to claim [16] 1, wherein the adeno-associated virus vector is vCWRHIVAPAP.

20. (Amended) A method according to claim [16] 1, wherein the adeno-associated virus vector is vCWRHIVASVN.

21. (Amended) A method according to claim [16] 1, wherein the adeno-associated virus vector is vCWRAP.

23. (Amended) A method for stably transferring DNA into multi-potential hematopoietic stem cells in the G0 phase of the cell cycle, which comprises transducing said multi-potential hematopoietic stem cells with an adeno-associated virus vector that contains said DNA, wherein said multi-potential hematopoietic stem cells are $CD34^{+++}CD38^{-}$ cells in the G0 phase of the cell cycle and wherein the transferred DNA remains integrated into the genome of the multi-potential hematopoietic stem cells for at least 4 weeks.